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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/546,971

Applicant(s)

SPRUIT ET AL.

Examiner

Jorge L Ortiz-Criado

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 18-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-14 is/are rejected.
- 7) ☒ Claim(s) 8, 15 and 23-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2655

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 18-22 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

Claims 18-²²~~21~~ are drawn to **a sequence of electromagnetic signals for an optical media** and as originally presented as a method and device for recording units at addressable locations with information represented by marks in a record carrier.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-17,²³⁻³¹ drawn to Method/Apparatus for recording units at addressable locations, classified in class 369, subclass 59.25.
- II. Claims 18-²²~~21~~, drawn to a sequence of electromagnetic signals, classified in class 369, subclass 275.4.

The inventions are distinct, each from the other because:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because method/apparatus as claimed does not requires the

Art Unit: 2655

features of the II invention since are drawn to a method including steps and apparatus executing the method steps for recording units at addressable locations which units does not require the **particular sequence of electromagnetic signals**. The subcombination has separate utility such as defining the data format layout and structure, by a particular **sequence of electromagnetic signals** written in the recording medium.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18-22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagara et al. U.S. Patent No. 6,147,957 in view of Tanaka et al. U.S. Patent No. 5,881,037.

Art Unit: 2655

Regarding claim 1, Nagara et al. discloses a method of recording information in units on a record carrier having a track for consecutively recording the information units at addressable locations (See col. 1, lines 47-57; col. 4, lines 29-46; Figs. 2,3,7,13),

the information being represented in the track by series of marks of different runlengths between a minimum runlength and a maximum runlength (“any number between 3T and 11T as a minimum and any number greater than the minimum but not greater than 11T as a maximum”; i.e. 4T and 10T respectively, etc.) and synchronizing patterns of marks which patterns do not occur in the series of marks (See col. 1, lines 47-57; col. 4, lines 17-51; Figs. 2,3,5,6,7,13), said method comprising:

(a) encoding at least one information unit into a modulated signal comprising signal elements corresponding to said marks (See col. 4, lines 9-12; col. 6, lines 15-29; Fig. 3,5,6,7),

(b) scanning said track up to a link position before a selected one of said addressable locations (See col. 4, lines 9-51; col. 6, lines 15-29; Fig. 3,5,6,7), and

(c) recording the modulated signal from the link position, characterized in that (See col. 4, lines 9-51; col. 6, lines 15-29; Fig. 3,5,6,7)

(d) the modulated signal is provided at the begin and/or at the end with a link signal element corresponding to a link mark of at most the minimum runlength ($3T < 4T$) (See col. 4, lines 9-51; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Nagara et al. does not expressly disclose wherein the synchronization patterns comprise at least one long mark of at least the maximum runlength.

Art Unit: 2655

However this feature is well known in the art as evidenced by Tanaka et al., which discloses synchronization pattern including at least one long mark in the synchronizing pattern; at least one long mark of at least the maximum runlength (See col. 9, line 45 to col. 10 lines 1-67).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to include at least one long mark in the synchronizing pattern, in order to discriminate the synchronization from the other data such as video and/or audio as suggested by Tanaka et al.

Regarding claim 2, the combination of Nagara et al. with Tanaka et al. would show the link signal element corresponds to a mark shorter than the minimum runlength (3T) (See Nagara et al. col. 7, lines 33-37; Fig. 6)

Regarding claim 3, a device for recording information in units on a record carrier having a track for consecutively recording the information units at addressable locations (See col. 1, lines 5-57; col. 4, lines 29-46; Figs. 1,2,3,7,13),

the information being represented in the track by series of marks of different runlengths between a minimum runlength and a maximum runlength ("any number between 3T and 11T as a minimum and any number greater than the minimum but not greater than 11T"; i.e. 4T and 10T respectively, etc.) and synchronizing patterns of marks, which patterns do not occur in the series of marks (See col. 1, lines 47-57; col. 4, lines 17-51; Figs. 2,3,5,6,7,13)

Art Unit: 2655

said device comprising encoding means for encoding at least one information unit into a modulated signal comprising signal elements corresponding to said marks (See col. 4, lines 9-12; col. 6, lines 15-29; Fig. 1,3,5,6,7) ,

and recording means for scanning said track up to a link position before a selected one of said addressable locations and recording the modulated signal from the link position (See col. 3 line 31 to col. 4, line 51; Fig. 1),

characterized in that the encoding means are arranged for providing the modulated signal at the begin and/or at the end with a link signal element corresponding to a link mark of at most the minimum runlength (3T) (See col. 4, lines 9-51; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Nagara et al. does not expressly disclose wherein the synchronization patterns comprise at least one long mark of at least the maximum runlength.

However this feature is well known in the art as evidenced by Tanaka et al., which discloses synchronization pattern including at least one long mark in the synchronizing pattern; at least one long mark of at least the maximum runlength (See col. 9, line 45 to col. 10 lines 1-67).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to include at least one long mark in the synchronizing pattern; at a runlength longer than the sum of the maximum runlength and the runlength of the link mark, in order to discriminate the synchronization from the other data such as video and/or audio as suggested by Tanaka et al.

Art Unit: 2655

Regarding claim 4, the combination of Nagara et al. with Tanaka et al. would show wherein said runlengths are expressed in steps of a channel bit (See Nagara et al. col. 1, lines 47-57; col. 4, lines 17-51; Figs. 2,3,5,6,7,13),

and the encoding means are arranged for providing the link signal element corresponding to a link mark one channel bit shorter than the minimum runlength (3T)(See Nagara et al. col. 7, lines 33-37; Fig. 6).

Regarding claim 5, the combination of Nagara et al. with Tanaka et al. would show synchronization pattern including at least one long mark in the synchronizing pattern; at a runlength longer than the sum of the maximum runlength and the runlength of the link mark (See Tanaka et al. col. 9, line 45 to col. 10 lines 1-67).

Regarding claim 6, the combination of Nagara et al. with Tanaka et al. would show wherein the encoding means comprise synchronizing means for providing the synchronizing pattern having said at least one long mark followed by a short mark of a runlength shorter than the maximum runlength (See Nagara et al col. 4, lines 9-12; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7)

and the encoding means are arranged for providing a second link signal element after the link signal element at the begin of the modulated signal, the second link signal element corresponding to a mark differing from the short mark (pattern 1, 3T) (See Nagara et al col. 4, lines 9-12; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Regarding claim 7, the combination of Nagara et al. with Tanaka et al. would show wherein the encoding means comprise means for variably selecting one out of a set of

Art Unit: 2655

fixed linking sequences that each start with the link signal element followed by further signal elements for recording marks up to the first synchronizing pattern (See Nagara et al col. 4, lines 9-51 ; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7)

substantially half of the linking sequences of the set having an odd number of mark boundaries (See Nagara et al col. 4, lines 9-65; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Regarding claim 9, the combination of Nagara et al. with Tanaka et al. would show wherein the device comprises means for processing or compressing digital or analog input signals such as audio and/or video to units of information (See Nagara et al. col. 4, lines 9-12; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Regarding claim 10, the combination of Nagara et al. with Tanaka et al. would wherein the input signals are audio and/or video signals (see Tanaka et al. Abstract)

Regarding claim 11, the combination of Nagara et al. with Tanaka et al. would wherein the encoding means comprise synchronizing means for providing said at least one long mark in the synchronizing pattern at a runlength longer than the sum of the maximum runlength and the runlength of the link mark (See Tanaka et al. col. 9, line 45 to col. 10 lines 1-67).

Regarding claim 12, the combination of Nagara et al. with Tanaka et al. would a record carrier produced by the method of claim 1 (See Nagara et al. col. 1, lines 5-57; col. 4, lines 29-46; Figs. 1,2,3,7,13) (See Tanaka et al. col. 9, line 45 to col. 10 lines 1-67)

Art Unit: 2655

Regarding claim 13, Nagara et al. discloses a method comprising:

encoding an information unit forming a recording signal of signal elements (See col. 3, lines 15-31; col. 4, lines 9-12; col. 6, lines 15-29; Fig. 3,5,6,7), the recording signal containing:

a linking signal element, a synchronizing pattern of signal elements, and the encoded information unit (See col. 4, lines 9-51; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7);

selecting an addressable location on the track of a record carrier; scanning the track up to a link position before the selected addressable location (See col. 4, lines 9-51; col. 6, lines 15-29; Fig. 3,5,6,7), and

recording the recording signal as marks corresponding to the signal elements and starting at the link position, the marks having different run lengths, the marks representing the information unit having run lengths that vary from a minimum run length to a maximum runlength, the pattern of marks representing the synchronizing pattern not occurring in the marks representing the information unit (See col. 1, lines 47-57; col. 4, lines 17-51; Figs. 2,3,5,6,7,13) and

the mark representing the link signal element having a run length of at most the minimum runlength (See col. 4, lines 9-51; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Nagara et al. does not expressly disclose wherein the synchronization patterns including a long mark of at least the maximum runlength.

Art Unit: 2655

However this feature is well known in the art as evidenced by Tanaka et al., which discloses synchronization pattern including at least one long mark in the synchronizing pattern; at least one long mark of at least the maximum runlength (See col. 9, line 45 to col. 10 lines 1-67).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to include at least one long mark in the synchronizing pattern; at a runlength longer than the sum of the maximum runlength and the runlength of the link mark, in order to discriminate the synchronization from the other data such as video and/or audio as suggested by Tanaka et al.

Regarding claim 14, Nagara et al. discloses a recording device comprising:

encoding means for encoding at least one information unit, and for variably selecting, one out of a set of fixed linking sequences that each start with a link signal element followed by further signal elements (See col. 4, lines 9-12; col. 6, lines 15-29; Fig. 3,5,6,7), and

for providing a recording signal of signal elements, the recording signal containing the selected linking sequence, a synchronizing pattern, and the encoded information unit (See col. 4, lines 9-51; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7)and

recording means for selecting an addressable location in the track of a record carrier, and

for scanning said track up to a link position before the selected addressable location and for recording the recording signal starting at the link position, the marks having different run lengths, the marks representing the information unit having run lengths that

Art Unit: 2655

vary from a minimum run length to a maximum runlength, the pattern of marks representing the synchronizing pattern not occurring in the marks representing the information unit (See col. 1, lines 47-57; col. 4, lines 17-51; Figs. 2,3,5,6,7,13) and the mark representing the link signal element having a run length of at most the minimum runlength (See col. 4, lines 9-51; col. 6, lines 15-29; col. 7, lines 33-37; Fig. 3,5,6,7).

Nagara et al. does not expressly disclose wherein the synchronization patterns including a long mark of at least the maximum runlength.

However this feature is well known in the art as evidenced by Tanaka et al., which discloses synchronization pattern including at least one long mark in the synchronizing pattern; at least one long mark of at least the maximum runlength (See col. 9, line 45 to col. 10 lines 1-67).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to include at least one long mark in the synchronizing pattern, in order to discriminate the synchronization from the other data such as video and/or audio as suggested by Tanaka et al.

Allowable Subject Matter

5. Claims 8, 15 and 23-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 16 and 17 are allowed.

Art Unit: 2655

Response to Arguments

7. Applicant's arguments filed 4/27/2004 have been fully considered but they are not persuasive.

Applicant's arguments filed 4/27/2004 have been fully considered but they are not persuasive.

Applicant response to rejections of claims 1,3,13 and 14.

Applicants argue that its is not clear how the references are compatible and the examiner has failed to present prima facie case against these claims for these reason.

The Examiner cannot concur because in Nagara et al is related to an information recording/reproducing apparatus to record/reproduce into an information recording medium which information is recorded in blocks basis and sectors and having particular synchronization marks represented by minimums and maximums runlength of channel bits distinguishable from any information data in the block recorded at the beginning or at the end of the block. And in view of Tanaka et al., which in similarity discloses a recording medium and recording/reproducing method and apparatus, which information is recorded in blocks and sector basis including synchronization marks at the beginning of the block represented by minimums and maximums runlength of channel bits distinguishable from other information data on the block. Theses and other possible similarities founded in the reference are believed to be characteristics of compatibility of Nagara et al and Tanaka et al.

Applicant response to rejections of claims 2 and 4.

Art Unit: 2655

Applicants argue that Nagara et al. does not show the recording of any marks shorter than the minimum runlength.

The Examiner cannot concur because claim 1 recites the limitation that marks are between a minimum and maximum runlength that could be any two numbers where one is greater than the other in the runlength availability. Nagara discloses the information being represented in the track by series of marks of different runlengths having runlengths between 3T and 11T. The Examiner has interpreted the limitations of between a minimum runlength and a maximum runlength ("any number between 3T and 11T as a minimum and any number greater than the minimum but not greater than 11T the maximum, i.e. 4T and 10T for instance. Hence, Nagara et al shows having the link signal element corresponds to a mark shorter than the minimum runlength 3T, which is smaller than 4T. What precisely, does the Applicant believe to correspond to the minimum and maximum claimed? Applicant is reminded that the claims are interpreted in light of the specification; limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant response to rejections of claims 13 and 14.

Applicant argue that could not find mention of scanning or addressable location in Nagara et al.

Nagara et al. discloses timing control means for controlling information recording timing so that a recording area on a track of the information recording medium is followed by another recording area. Nagara et al. discloses that the disc controlling the timing when recording a new ECC block is recorded in overlapping manner at the last

Art Unit: 2655

frame of the linking section by timing of the servo circuit, hence at the addressable location of the block and recorded at the link position, (See col. 4, line 29 to col. 5, line 2)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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W. R. YOUNG
PRIMARY EXAMINER